

Abstract of the Disclosure

A protection arrangement for an optical switching system includes protection switching for switch planes in the optical core and for ports in the tributary cards. For a multiple layer switch core protection is also provided between layers. A first layer is for switching optical channels. The protection switches used may be 1xN, 2xN or 3xN MEMS optical switches. The 1xN MEMS provides for protection switching. The 2xN MEMS provides protection switching and testing capability. The 3xN MEMS provides for protection switching, testing and backup of the protection switching. Application of these protection switches is shown in lambda plane switch cores, multiple layer switch cores and combined switch cores.